Document: **Abstract**
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Compared to equipment designed to perform the same function over and over, humans are just not as reliable. Computers and machines perform the same action in the same way repeatedly getting the same result, unless equipment fails or a human interferes. Humans who are supposed to perform the same actions repeatedly often perform them incorrectly due to a variety of issues including: stress, fatigue, illness, lack of training, distraction, acting at the wrong time, not acting when they should, not following procedures, misinterpreting information or inattention to detail.

Why not use robots and automatic controls exclusively if human error is so common? In an emergency or off normal situation that the computer, robotic element, or automatic control system is not designed to respond to, the result is failure unless a human can intervene. The human in the loop may be more likely to cause an error, but is also more likely to catch the error and correct it. When it comes to unexpected situations, or performing multiple tasks outside the defined mission parameters, humans are the only viable alternative. Human Reliability Assessments (HRA) identifies ways to improve human performance and reliability and can lead to improvements in systems designed to interact with humans. Understanding the context of the situation that can lead to human errors, which include taking the wrong action, no action or making bad decisions provides additional information to mitigate risks. With improved human reliability comes reduced risk for the overall operation or project.